



City of Danville, Virginia

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INFORMATION FOR BIDDERS

TITLE: "City of Danville, Feasibility Assessment Riverbank Filtration Evaluation"

BID NO: IFB 16-17-019

BID CLOSING DATE: Bids shall be accepted no later than Wednesday, October 12, 2016 at 2:00 p.m. at the Purchasing Department, 427 Patton Street, Room 304, Danville, VA 24541.

PRE BID CONFERENCE: A non-mandatory pre-bid meeting will be held at 10 a.m. on Tuesday, August 30, 2016 at the Danville Water Treatment Plant (279 Park Avenue) conference room.

DIRECT INQUIRES TO: J. Gary Via, Director of Purchasing
(434) 799-6528 Opt. 4

TABLE OF CONTENTS

- 1.0 Introduction
- 2.0 Outline of Work Scope
- 3.0 Proposed Scope of Work
- 4.0 Deliverables
- 5.0 Standard Requirements
- 6.0 Submittal Requirements
- 7.0 Award Procedures
- Bid Proposal

**CITY OF DANVILLE
FEASIBILITY ASSESSMENT
RIVERBANK FILTRATION EVALUATION
August 3, 2016**

1.0 INTRODUCTION

1.1 This investigation is focused on assessing the feasibility of utilizing “Riverbank Filtration” (RBF) to improve the overall potable water quality of the City’s surface water supply. RBF involves locating water supply wells in proximity to a surface water body (in this case, the Dan River) to take advantage of the streambed and aquifer (unconsolidated) sediments as a medium for removing surface water contaminants. Surface water enters the aquifer when the water table is lowered below the river level; this process is known to induce infiltration. Unconsolidated sand and gravel aquifers can act as natural filters, removing microbial material through such mechanisms as straining, adsorption, predation. In certain situations, the concentration of pathogens may also be reduced through dilution of surface water within regional groundwater sources. Therefore, RBF can serve as a pretreatment process, or where the treatment is particularly effective, it can complete the treatment of the surface water so that it only requires disinfection.

1.2 Deadline

Bids must be received in the Purchasing Office no later than **Wednesday, October 12, 2016 at 2:00 p.m.** Please mail to City of Danville, Attn: Mr. Gary Via, Purchasing Director, Purchasing Department, Room 304, 427 Patton Street, Danville, VA 24541. **A pre-bid meeting will be held at 10 a.m. on Tuesday, August 30, 2016 at the Water Treatment Plant conference room.** All questions concerning this bid should be directed to Mr. Gary Via at the address above or email viajg@danvilleva.gov.

2.0 OUTLINE OF WORK SCOPE -- HYDROGEOLOGIC SERVICES ASSOCIATED WITH ASSESSING THE POTENTIAL TO USE RIVERBANK FILTRATION TO IMPROVE THE CITY OF DANVILLE’S SURFACE WATER QUALITY

2.1 Phase I Hydrogeologic Review of the Selected Study Area Product

Conduct site investigations and generate a GIS basemap illustrating the hydrogeologic setting of the project study areas. The map will present the geology of the study area, bedrock fracture fabric date, hydrogeologic settings, and potential contaminant threats. The results of this Phase will provide an overall

assessment of the potential for unconsolidated alluvial deposits to exist where effective RBF can occur. Attached is a map identifying four proposed locations to be considered initially for RBF. Other sites may be identified as necessary. A maximum of ten (10) sites will be investigated.

- 2.2 Phase II Specific Siting of Test Wells -- Geophysical Surveys Product**
Geophysical surveys (using electrical resistivity) will be conducted throughout selected portions of the study area. The data will be compiled and analyzed relative to identifying the thickness and permeability of the unconsolidated deposits that may be suitable for use for RBF. The results of these surveys will be the placement of wooden stakes in the ground indicating exactly where the drilling of exploratory test wells should take place. Each selected drilling target will be priority ranked according to its potential to be used for RBF.
- 2.3 Phase III Exploratory Test Well Drilling and Testing -- An appropriate number of exploratory test wells will be drilled at those locations defined in Phases I and II**

Task A – Permitting of Test Well Sites (as needed)

Task B – Exploratory Test Well Drilling -- The drilling of exploratory test wells will provide a preliminary determination of the volume and quality of groundwater (induced infiltration) that can be developed on the project site to meet the specific purposes intended.

- 2.4 Phase IV Develop Formal Plan for Utilization of RBF and Estimate of the amount of Water that could be withdrawn from Surficial Deposits.**

3.0 PROPOSED SCOPE OF WORK

3.1 PHASE I HYDROGEOLOGIC SITE CHARACTERIZATION

The underlying key to successfully evaluating the potential to develop groundwater supplies from unconsolidated deposits recharged by adjacent rivers (RBF) is the ability for geologists to consistently and accurately delineate zones of laterally extensive permeable sandy layers, of sufficient saturated thickness, that are connected to sources of recharge (i.e. Dan River). These deposits must be capable of transmitting sufficient quantities of water, such that infiltrating water can efficiently be recovered through wells or infiltration galleries. In certain cases, groundwater recharge to the underlying aquifer can be enhanced using Artificial Recharge (AR) techniques.

Task A Remote Sensing Analyses of Local Hydrogeologic Environment

Preferential weathering and erosion often occurs in places where bedrock is highly fractured, leading to the development of troughs in the bedrock surface. In the Dan River Valley, such over deepened troughs can provide locations for the

deposition of thicker alluvial materials that can potentially allow for infiltration of surface water. Recent (in terms of geologic time) Quaternary Faulting can also lead to the development of deepened bedrock troughs. Two faults have been mapped that offset Quaternary unconsolidated deposits in the vicinity of Danville. The Stanleytown-Villa Heights Faults, as they are known, have a relatively small offset, however, in terms of providing a setting where the saturated thickness of surficial materials can occur, this displacement can be significant. Remote-sensing analyses of different scales of aerial photography, digital elevation data, and satellite imagery will be conducted to help characterize the underlying geologic structure and fracture fabric of the study area to identify buried bedrock troughs. This will be accomplished by delineating photolineaments for each data set. This remote sensing effort helps extend bedrock fracture features noted in the field to areas where bedrock is concealed below unconsolidated alluvial sediment. In addition, remote sensing efforts can be used to identify the distribution of surficial deposits and to recognize locations where favorable areas might exist for RBF.

Task B Geologic Field Mapping/Fracture Fabric Analyses

Geologic field mapping: The remote-sensing analysis of bedrock structure and surficial deposits will be “ground truthed” through a program of on-site geologic field mapping. Available bedrock outcrops and surficial deposit exposures within the defined study area will be investigated by geologists in terms of bedrock fracture characteristics and the textural permeability characteristics of the surficial/alluvial deposits. A photolineament can be loosely defined as a mappable linear feature, seen on the terrain surface, whose parts are aligned in a rectilinear or curvilinear manner. Photolineaments often reflect a subsurface geologic feature that can be correlated with fault or fracture zones in the underlying bedrock. The transmissive nature of alluvial deposits. Fracture fabric analysis: The orientations of observed photolineaments will be analyzed and correlated with bedrock fracture orientations as seen in the field. The bedrock structures, as observed in the photos, which correlate with those bedrock fractures observed on the ground, will be used to delineate those sites considered most favorable for RBF from alluvial aquifers within over deepened troughs.

Task C Evaluate Potential Contaminant Threats to Groundwater Quality

Review State and Federal databases and GIS data sets, evaluate aerial photos, and perform street-level windshield surveys to assess potential threats to groundwater quality within the proposed study area. The purpose of this task is to identify areas where past or present land use activities may have adversely impacted groundwater quality and where RBF would not be recommended.

Task D Preparation of Preliminary Map showing the Potential Locations where RBF would most likely be Achievable

Present a map showing all of the data collected in Phase I (Tasks A-C). Locations considered feasible for utilizing RBF will be identified. Each location will be “priority ranked” in accordance with their overall favorability for utilizing RBF.

3.2 PHASE II GEOPHYSICAL INVESTIGATIONS – SELECTION OF SPECIFIC EXPLORATORY DRILLING TARGETS/SITES

Once favorable target areas for RBF are identified in Phase I, specific test well drilling targets will be sited within the study area using geophysical investigations. The geophysical equipment to be used to evaluate the project site includes electrical resistivity. Electrical resistivity geophysical surveys, which provide a cost effective method for investigating the subsurface conditions of unconsolidated deposits (i.e., sand and gravel aquifers and over-deepened bedrock troughs) would be used. Electrical resistivity surveys are used to assess where the depth to bedrock is greatest and where thick sequences of alluvial materials may exist. Geophysical surveys will be conducted across the preferred sub-areas identified in Phase I. The results of geophysical testing of sites will be the placement of wooden stakes in the ground indicating exactly where exploratory test well drilling is warranted. All selected drilling targets will be priority ranked according to the likelihood of drilling wells where Riverbank Filtration may be achieved.

3.3 PHASE III INSTALLATION OF EXPLORATORY TEST WELLS

Task A Obtain Necessary Drilling Permits from State and County Health Departments

Will work with both the State, City or County Health officials to obtain drilling permits at the locations selected for exploratory drilling. It is possible that setback waivers will be required in order to obtain the desired drilling permits.

Task B Exploratory Test Well Drilling

Exploratory test borings will be drilled at up to 20 locations selected during previous investigations (Phases I and II). Drilling of these wells will be used to characterize the depth to rock and the nature of the underlying alluvial sediment. A geologist will log each test well that is drilled. The geologist will collect at least one sample from each geologic formation encountered. Using the data collected during the drilling program, prepare certified well logs which show the stratigraphy of the alluvial deposits and “as built” drawings of the well construction. These logs will be submitted as part of our final hydrogeological report to both the State, City or County Health Departments. Upon completion of the test well drilling, each well will be developed to remove fine sediments and to maximize well yield. A brief pumping test will be performed on each test well to evaluate its potential transmissive capabilities and how much water might be able to be withdrawn from the deposits. During the drilling program, verbal interim reports will be presented to the Client describing the progress this groundwater

investigation has made in reaching project objectives. The City provide the following: 1) permission to access private property, and 2) to provide adequate access for the drilling rig to reach each selected exploratory well site.

3.4 PHASE IV DEVELOP PLAN FOR UTILIZATION OF RBF AND ASSESS THE AMOUNT OF WATER THAT SURFICIAL DEPOSITS COULD ACCEPT FOR TREATING SURFACE WATER

If the results of Phases I-III are favorable, the work scope for Phase IV will then be developed. This work scope will be based upon the geotechnical data collected to date.

4.0 DELIVERABLES

Three (3) copies of a draft of each phase shall be submitted to the City for review. Upon approval of the draft, the company shall submit ten (10) copies of the final report detailing the results of each phase with a CD submitted with all phases of the work included.

5.0 SUPPLEMENTAL GENERAL CONDITIONS

5.1 Compliance: The Contractor shall comply with the provisions of the following:

The City of Danville's "Standard Requirements", Version 1.0, dated February 23, 2016. Copies may be obtained from the Purchasing Office or downloaded from the City's website.

5.2 Award

The award will be made to the lowest responsible and responsive bidder, with consideration given to completion time.

The City reserves the right to reject any or all offers and to waive informalities and minor irregularities in offers received.

5.3 Authority

The Director of Purchasing as the designee of the City Manager has the sole responsibility and authority for negotiating, placing, and when necessary modifying each and every invitation to bid, purchase order or other award issued by the City of Danville. In the discharge of these responsibilities, the Director of Purchasing may be assisted by assigned buyers. No other City officer or employee is authorized to order supplies or services, enter into purchase negotiations, or in any way obligate the government of the City of Danville for any indebtedness. Any purchases contrary to these provisions and authorities shall be void and the City shall not be bound thereby.

This procurement process, including withdrawal of bids and appeal or protests, is governed by the "PROCUREMENT CODE OF THE CITY OF DANVILLE, VIRGINIA". Copies of the Procurement Code may be obtained by writing the City of Danville Purchasing Department, 427 Patton St. Room 304, Danville, Virginia 24541. The City of Danville does not discriminate against faith based organizations.

5.4 Bid Preparation

Bids must be written in ink or typewritten and shall be submitted on the forms issued. Unsigned or qualified bids will not be accepted. No bid may be considered if received after the time shown on Title Page. Contractors are expected to examine all instructions, specifications, drawings, sites, installations, etc. Failure to do so will be at the Contractor's risk. Erasures or other changes must be initialed by the person signing the bid.

Envelopes containing bids must be sealed and marked in the lower left hand corner IFB " " and submitted to the office indicated on title page.

5.5 Bidder Eligibility

Bidders are required to submit evidence that they have practical knowledge of the particular work bid upon and that they have the financial resources to complete the proposed work. Failure on the part of any Bidder to carry out previous contracts satisfactorily, or lack of experience or equipment necessary for the satisfactory and timely completion of this Project, may be deemed sufficient cause for disqualification of said Bidder.

The Bidder must readily and independently document that the Bidder possesses the experience, equipment and financial resources necessary for a timely and professional completion of this project.

Irregular Bids: Bids shall be considered irregular for the following reasons:

If the bid is on a form other than that furnished by the City, if the City's form is altered, or if any part of the bid form is detached.

If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind which make the bid incomplete, indefinite, or otherwise ambiguous.

If the bid does not contain a unit price for each pay item listed in the bid.

If the bid contains unit prices that are obviously unbalanced.

If the bid is not accompanied by the bid guaranty specified by the City.

Withdrawal of Bid Due to Error:

A bidder for a City construction contract, other than a contract for construction or maintenance of public highways, may withdraw his bid from consideration, if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith and the mistake was a clerical mistake, as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an

unintentional omission of a quantity of work, labor, or material made directly in the compilation of the bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents, and materials used in the preparation of the bid sought to be withdrawn.

The bidder shall give notice in writing of his claim of the right to withdraw his bid within two (2) business days after the conclusion of the bid opening procedure.

Disqualification of Bidder: A bidder shall be considered disqualified for any of the following reasons:

Submitting more than one bid from the same partnership, firm, or corporation under the same or different name.

Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the City until any such participating bidder has been reinstated by the City as a qualified bidder.

5.6 Bids Binding 60 Days

Unless otherwise specified, all formal bids submitted shall be binding for sixty (60) calendar days following bid-opening date.

5.7 Cleanup

The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the work, he shall remove all his waste materials and rubbish from and about the project as well as all his tools, construction equipment, machinery, and surplus materials.

If the Contractor fails to clean up at the completion of the work, the City may do so and the cost thereof shall be charged to the Contractor.

5.8 Control of Work

On all questions relating to quantities, the acceptability of materials and equipment, or work, and the interpretation of the Contract Documents, the decision of the Project Manager is final and binding, and shall be precedent to any payment under the contract.

All work and material are subject to the inspection and approval of the Project Manager. Any work done without proper inspection will be subject to rejection. Inspection of the work shall not relieve the Contractor of the obligation to fulfill all conditions of the contract. The Project Manager may require the Contractor to remove from the work any employee, as the Project Manager may deem incompetent, careless or insubordinate.

Certain items of work may be performed by forces of the City. The Contractor shall cooperate fully in scheduling and coordinating with the Project Manager such that no delay will result in the performance of such work. If the Contractor claims that such work delays or causes additional costs, he shall make claims as provided in Work Changes.

The City may award, or may have awarded contracts to others for other work. The Contractor shall cooperate fully with such other Contractors by scheduling his own work with that to be performed under other Contracts as may be directed by the City. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor as scheduled.

Neither the final certificate of payment nor any provision in the contract documents, nor partial or entire occupancy of the premises by the City, shall constitute an acceptance of work not done in accordance with the contract documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of work unless a longer period is specified. The City will give notice of observed defects with reasonable promptness.

5.9 Equal Employment

During the performance of this contract, the Contractor agrees as follows:

The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin, except where religion, sex, or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions for this non-discrimination clause.

The Contractor also shall not discriminate against any handicapped person in violation of any state or federal law or regulation and shall also post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this additional non-discrimination clause.

The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such contractor is an equal opportunity employer.

Notices, advertisements, and solicitations placed in accordance with Federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

The Contractor will include the provisions of the foregoing paragraphs in every subcontract or purchase order over \$10,000 so that the provisions will be binding upon each subcontractor or vendor.

The Contractor will otherwise comply with all other applicable provisions of local, State, and Federal law. The contractor does not, and shall not during the performance of the contract for goods and services in the Commonwealth; knowingly employ an

unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.

5.10 Drug Free Work Place

During the performance of this contract, the contractor agrees to:

Provide a drug-free workplace for the contractor's employees.

Post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition.

State in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace

Include the provisions of the foregoing clauses in every subcontract or purchase order of or over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

"Drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this chapter, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

5.11 Guaranty

The Contractor shall guarantee that all the materials used and all the work done under the contract shall fully comply with the requirements of the plans and specifications and the instructions of the City.

All expenses covering return or replacement of defective or improper equipment or merchandise will be assumed by the Contractor. In no instance shall the contractor refer the City to any distributor or manufacturer for settlement of any claim arising from defective or improper equipment or merchandise. If the Contractor shall fail to replace or repair any defective or improper equipment or merchandise within thirty (30) days from date of notice, the City may make the necessary corrective arrangements and charge the cost to money due the Contractor or bill the Contractor. The Contractor agrees to reimburse the City in such instances. Samples of any warranties which will apply to the goods being offered for sale shall be included as part of the bid.

Any defects in the completed work or failure of the construction to fully perform or endure the service for which it is intended, which in the opinion of the City are caused by or due to the use of materials, skill or workmanship not in compliance with the said plans, specifications and instructions, that may appear in the work within a period of twenty-

four (24) months after acceptance by the City shall be regarded as prima facie and conclusive evidence that the Contractor has failed to comply with the said specifications, plans, and instructions. The Contractor in this event, shall at his own expense, at such time and in such manner as the Engineer may direct, repair or take up and reconstruct any such defective work, in full compliance with the original specifications, plans, and instructions. The repairs required to be made by the Contractor shall extend only to making good an inherent defects which become manifested in the materials and workmanship under ordinary conditions, and shall not be held to cover any breakage or damage caused by improper use or by accident resulting from circumstances over which the Contractor has no control.

5.12 Indemnification

The Contractor shall indemnify, keep and save harmless the City, its agents, officials and employees, against all injuries, deaths, loss, damages, claims, patent claims, suits, liabilities, judgments, costs and expenses, which may in anywise accrue against the City, its agents, officials and employees in consequence of the granting of this contract or which may in anyway result therefrom, whether or not it shall be alleged or determine that the act was caused through negligence or omission of the Contractor or his employees, or of the subcontractor or his employees, if any, and the Contractor shall, at his own expense, appear, defend and pay all charges of attorneys and other expenses arising therefrom or incurred in connection therewith, and, if any judgment shall be rendered against the City in any such action, the Contractor shall, at his own expense, satisfy and discharge the same. The Contractor expressly understands and agrees that any performance bond or insurance protection required by this contract, or otherwise provided by the Contractor, shall in no way limit the responsibility to indemnify, keep and save harmless and defend the City, its agents, officials, and employees as herein provided. The Contractor shall have charge and control of the entire work until its completion and acceptance by the City.

The Contractor shall assume all risks and responsibilities for casualties of every description in connection with the work, except that he shall not be held liable or responsible for delays or damage to the work caused by acts of God, acts of Public enemy, acts of Government, quarantine restrictions, general strikes through the trade, or by freight embargoes not caused or participated in by the Contractor. The Contractor shall have charge and control of the entire work until completion and acceptance of the same by the City.

The Contractor shall alone be liable and responsible for, and shall pay, any and all loss or damage sustained by any person or party either during the performance or subsequent to the completion of the work under this agreement by reason of injuries to persons and damage to property, buildings, and adjacent work, that may occur either during the performance of the work covered by this contract or that may be sustained as a result of or in consequence thereof, irrespective of whether or not such injury or damage be due to negligence or the inherent nature of the work.

The Contractor shall bear all losses resulting from the amount or character of the work being different, or because the nature of the premises on which the work is done is different from what was expected, or on account of the weather, or similar other causes.

5.13 Insurance

The Contractor shall not commence work under this contract until he has obtained all the insurance required hereunder and such insurance has been approved by the City; nor shall the Contractor allow any Subcontractor to commence work on his subcontract until all similar insurance has been so obtained and approved. Approval of the insurance by the City shall not relieve or decrease the liability of the Contractor hereunder.

Worker's Compensation including Occupational Disease and Employer's Liability Insurance: The Contractor shall take out and maintain during the life of this Contract Workers' Compensation and Employer's Liability Insurance for all of his employees to be engaged in work on the project under this contract in an amount no less than the minimum allowed by the State Corporation Commission, and in case of such work is sublet, the Contractor shall require the Subcontractor similarly to provide Workers' Compensation and Employer's Liability Insurance for all of the latter's employees to be engaged in such work.

Comprehensive General Liability Insurance: The Contractor shall maintain during the life of this Contract comprehensive general liability insurance as shall protect him, the City of Danville and its offices, agents and employees, and any Subcontractors performing work covered by this Contract from claims for damage for personal injury, including death, as well as from claims for property damage, which may arise from operations under this Contract, whether such operations by himself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amount of such insurance shall not be less than a combination single limit of \$1,000,000 per occurrence on bodily injury and property damage and \$1,000,000 aggregate on completed operations. The comprehensive general liability insurance shall provide the following coverage:

- Comprehensive
- Premises – Operation
- Products/Completed Operations Hazard
- Contractual Insurance
- Underground Hazard
- Explosion & Collapse Hazard
- Independent Contractor and Subcontractor
- Broad Form Property Damage
- Personal Injury

Automobile liability insurance minimum combined single limits of \$1,000,000 for any one person and subject to the same limit for each person, \$1,000,000 on account of any one accident. This insurance shall include bodily injury and property damage for the following vehicles:

Owned Vehicles
Non-owned Vehicles
Hired Vehicles

Umbrella Policy. At the option of the Contractor, primary limits may be less than required, with an umbrella policy providing the additional limits needed. This form of insurance will be acceptable provided that the primary and umbrella policies both provide the insurance coverage's herein required. However, any such umbrella policy must have minimum coverage limits of \$3,000,000.00.

All policies shall name the City of Danville, its officers, agents, and employees, as additional insured. This coverage shall be reflected on the Certificates of Insurance (including any endorsements or riders thereto), which will be provided to the City. Each Certificate of Insurance shall require that notice be given thirty (30) days prior to cancellation or material change in the policies to the Director of Purchasing.

Written evidence of the insurance required herein shall be filed with the City not later than thirty (30) days following the date of the award of the Contract. A copy of the evidence of insurance shall be filed with the Director of Purchasing.

5.14 Interpretation

If any person contemplating the submission of a bid on this invitation is in doubt as to the true meaning of any part of the Invitation for bid or other documents, he should submit a written request for an interpretation thereof to the Engineer and received at least four (4) days before bid deadline. An interpretation of the bid invitation document will be made only by written addendum issued to each potential bidder. THE CITY WILL NOT BE RESPONSIBLE FOR EXPLANATIONS OR INTERPRETATIONS OF BID INVITATION DOCUMENTS EXCEPT AS ISSUED IN ACCORDANCE HEREWITH. The Bidder shall acknowledge receipt of all addenda in the Bid.

All notices, demands, requests, instructions, approvals, bids, and claims must be in writing.

If during performance of the Work, the Contractor finds a conflict, error or discrepancy in the Contract Documents, the contractor shall so report to the Engineer in writing at once before proceeding with the work affected thereby and shall obtain a written interpretation or clarification from the Engineer. In resolving such conflicts, errors and discrepancies, the Documents shall be given precedence in the following order: Agreement, Modifications, Addenda, Supplementary Conditions, Instruction to Bidders, General Conditions, Bids and Specifications/Drawings. Figure dimensions on Drawings shall govern over scale dimensions and detailed drawings shall govern over general drawings.

5.15 Limitations of Work Area

The Contractor shall be limited to a specific area for storage of equipment, supplies, and building materials. This area shall be designated by the City and established during the Pre-construction conference.

Parking area for employees of the Contractor shall be designated in the vicinity of the project, and it shall be the responsibility of the Contractor to require his personnel to park in this designated area and not any area which may interfere with the normal operations in and around the construction area or with access and use of the facility by the City.

5.16 Novation

The Contractor shall not assign or transfer, whether by an Assignment or Novation, any of its rights, duties, benefits, obligations, liabilities or responsibilities under this Contract without the written consent of the City; provided, however, that assignments to banks, trust companies or other financial institutions for the purpose of securing bond may be made without the consent of the City. Assignment or Novation of this Contract shall not be valid unless the Assignment or Novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered and materials, tools and equipment supplied for the performance of the work under this Contract in favor of all persons, firms or corporations rendering such labor or services or supplying such materials, tools and equipment.

5.17 Observance of Laws

The Contractor at all times shall observe and comply with all Federal, State and City laws, bylaws, ordinances and regulations in any manner affecting the conduct of the work or applying to employees on the project, as well as all orders or decrees which have been promulgated or enacted, by any legal bodies or tribunals having authority or jurisdiction over the work materials, employees or contract. The contractor does not, and shall not during the performance of the contract for goods and services in the Commonwealth; knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.

SCC Number: Contractors organized or authorized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or title 50 or as otherwise required by law.

A Contractor organized or authorized to transact business in the Commonwealth pursuant to Virginia Title 13.1 or Title 50 shall include in its bid or proposal the identification number issued to it by the State Corporation Commission. Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law shall

include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized.

5.18 Patents

The Contractor agrees to indemnify and save harmless the City, and all personnel from all suits and actions of every nature and description brought against them or any of the, for or on account of the use of patented appliances, products, or processes, and he shall pay all royalties and charges which are legal and equitable. Evidence of such payment or satisfaction shall be submitted upon request of the City as a necessary requirement in connection with the final execution of any contract in which such patented appliances, products, or processes are used.

5.19 Performance

In case of default by the Contractor, the City may procure the commodity or services from other sources and hold the Contractor responsible for any excess costs occasioned thereby.

5.20 Permits

The Contractor shall, at his own expense, secure any business or professional licenses, permits or fees required by the City of Danville, Commonwealth of Virginia or any other requesting agency having jurisdiction.

5.21 Safety

All practices, materials and equipment shall comply with the Federal Occupational Safety and health Act, as well as any pertinent Federal, State and/or local Safety or Environmental Codes.

Construction site safety is the responsibility of the Contractor.

5.22 Specifications and Product Description

When brand names, model numbers, trade names, catalog number or cuts are listed, they are, unless otherwise specified, included for the purpose of furnishing bidders with information concerning the style, type or kind of article desired and a bidder may offer an article which he certifies to be equal in quality, performance and other essential characteristics. Any available printed material or literature which describes the product being offered for sale shall be included with the bid. The City shall be the sole judge of suitability of substitutes offered. When a formal numbered specification is referred to in this invitation, no deviation will be permitted and the bidder will be required to furnish articles in conformity with that specification.

5.23 Subcontracts

No proposed subcontractor shall be disapproved by the City except for cause.

The Contractor shall be as fully responsible to the City for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them as he is for the acts and omissions of persons directly employed by him.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to require compliance by each subcontractor with the applicable provisions of the Contract for the improvements embraced in this Contract.

Nothing contained in the Contract shall create any contractual relation between any subcontractor and the City.

Payments to subcontractors

1. The contractor shall take one of the two following actions within seven days after receipt of amounts paid to the contractor by the City of Danville for work performed by the subcontractor.
 - a. Pay the subcontractor for the proportionate share of the total payment received from the agency attributable to the work performed by the subcontractor under that contract; or
 - b. Notify the agency and subcontractor, in writing, of his intention to withhold all or a part of the subcontractor's payment with the reason for nonpayment.
2. Individual Contractors shall provide their social security numbers and proprietorships, partnerships, and corporations to provide their federal employer identification numbers.
3. The contractor shall pay interest to the subcontractor on all amounts owed by the contractor that remain unpaid after seven days following receipt by the contractor of payment from the City of Danville for work performed by the subcontractor, except for amounts withheld as allowed in subdivision 1.
4. Unless otherwise provided under the terms of this contract, interest shall accrue at the rate of one percent per month.

The contractor shall include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.

A contractor's obligation to pay an interest charge to a subcontractor pursuant to the payment clause in this section shall not be construed to be an obligation of the City of Danville. A contract modification shall not be made for the purpose of providing reimbursement for the interest charge. A cost reimbursement claim shall not include any amount for reimbursement for the interest charge.

5.24 Suspension of Work

The work may be suspended by the City when deemed in the best interest of the City.

5.25 Termination

If the Contractor fails to begin the work under this contract within the time specified, or fails to perform the work with sufficient workmen and equipment or with sufficient materials to insure the completion of said work within the specified time, or shall perform the work in an unsatisfactory manner, or shall neglect or refuse to remove materials or perform anew such work as shall discontinue the prosecution of the work, or if the Contractor shall become insolvent or be declared bankrupt, or shall commit any act of bankruptcy or insolvency, or shall make an assignment for the benefit of creditors, or from any other cause whatsoever shall not carry out the work in an acceptable manner, the City shall give notice in writing to the Contractor and his surety of such failure, delay, neglect, refusal, or default, specifying the same and if the contractor, within a period of seven days after such notice, shall not proceed in accordance therewith, then the City Manager acting for and on behalf of the City shall, upon receipt of a written certificate from the Engineer of the fact of such failure, delay, neglect, refusal, or default and of failure of the Contractor to comply with such notice, have full power and authority to declare the forfeiture of this contract, and to forfeit the rights of the Contractor in this contract, and the City Manager at this option may call upon the surety to complete the work in accordance with the terms of this contract or may have the City take over the terms of this contract or may have the City take over the work, including any or all materials and equipment on the ground as may be suitable and acceptable to the City and may complete the work by or on its own employees, or may enter into a new contract for the completion of the work, or may use such other methods as in the opinion of the City Manager shall be required for the completion of the work in an acceptable manner. All costs and charges incurred by the City, together with the cost of completing the work, shall be deducted from any monies due or which may become due on this contract.

In case the expense so incurred by the City shall be less than the sum which would have been payable under this contract if it had been completed by the Contractor and had not been forfeited by the City, then the Contractor shall be entitled to receive the difference, subject to any claims of liens thereon which may have been filed with the City or any prior assignment filed with it. In case such expense shall exceed the sum which would have been payable under this contract, the Contractor and the surety shall be liable and shall pay the City the amount of such excess.

5.26 Work Changes

The City without invalidating the contract, and without notice to any surety, may order changes in the work within the general scope of the contract consisting of additions, deletions or other revisions, providing the total amount added or eliminated does not exceed twenty-five percent (25%) of the total contract price, or \$50,000, whichever is greater. All such changes in the work shall be authorized by change order, and shall be executed under the applicable conditions of the contract documents.

The cost or credit to the City resulting from a change in the work shall be determined by unit prices subsequently agreed upon or by mutual acceptance of a lump sum properly itemized, or on the basis of cost of Work plus a Contractors Fee for overhead and profit as determined below.

Should concealed conditions encountered in the performance of the work below the surface of the ground or hidden in existing structures be at variance with the conditions indicated by the contract documents, the contract price may be equitably adjusted by change order upon claim by either party and approval of the other party, made within either party and approval of the other party, made within twenty (20) days after the first observance of the conditions.

The Contractor shall promptly, and before such conditions are disturbed, notify the Project Manager in writing of: (a) subsurface or latent physical conditions at the site differing materially from those indicated in this contract, or (b) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract. The Project Manager shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the contractor's cost of, or the time required for, performance of this contract, and equitable adjustment shall be made and the contract modified in writing accordingly. Any claim of the Contractor for adjustment hereunder shall not be allowed unless he has given notice as above required; or unless the Project Manager grants a further period of time before the date of final payment under the contract.

6.0 SUBMITTAL REQUIREMENTS

Bids should include as a minimum, the following information in the order detailed:

6.1 Transmittal Letter must be signed by an officer of the firm.

6.2 A statement identifying the Contractor's relevant experience and capability. Proposers will be evaluated based upon their experience and qualifications. The experience statement should include the number of similar Projects and the demonstrated experience and competency of the key personnel that shall be assigned to this Project. Provide the Firm's most recent audit financial statement or similar financial statement

suitable to determine the capitalization and credit worthiness of the Company.

6.3 Staffing

Provide a listing of the specified individuals assigned and provide the background and experience of those individuals.

6.4 Any permit, approvals, etc. required by the State of Virginia to accomplish all current and future work shall be the responsibility of the successful bidder.

6.5 Each bidder shall submit a formal Safety Program stating company policy on all safety procedures. Document procedures to include workers protection and general safety procedures.

7.0 AWARD PROCEDURES

7.1 A selection committee shall review the bids submitted.

7.2 The selection committee will subsequently prepare a recommendation to the City administration for their consideration.

7.3 The City reserves the right to reject any and all bids submitted and to waive any informality in the bids. The right is also reserved to award the contract where it appears to be in the best interest of the City of Danville.

7.4 The following areas shall be used to evaluate the Bids:

- a. At least ten (10) years' work experience of the firm in similar work.
- b. Capability of firm to do the work in a timely manner.
- c. Experience and qualifications of personnel assigned.
- d. Project cost.
- e. Time for completion after award.

**BID PROPOSAL
CITY OF DANVILLE
Feasibility Assessment Riverbank Filtration Evaluation**

The undersigned, as Bidder, hereby declares that he or she and their associates are the only person or persons interested in the bid as principal or principals; that this bid is made without connection with any other person, company, or parties making a bid or proposal; and that it is in all respects fair and good faith without collusion or fraud.

The Bidder further declares that they have examined the site of the work and informed themselves fully in regard to all conditions pertaining to the place where the work is to be done; that they have examined the specifications for the work and contractual documents relative thereto, and have read all special provisions furnished prior to the bid opening; that they have satisfied themselves relative to the work to be performed, and materials and equipment to be furnished.

The Bidder proposes and agrees, if this bid is accepted, to contract with the City of Danville, Virginia in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation, and labor necessary to perform in full and complete the requirements of the specifications and contract documents, to the full and entire satisfaction of the City of Danville, Virginia with definite understanding that no money will be allowed for extra work except as set forth in the attached General Conditions and Contract Documents, for the unit prices set opposite the several items that follow:

The Bidder further agrees that:

1. The City, in protecting its best interest, reserves the right to reject any or all bids or waive any defects in favor of the City. Any changes, erasures, deletions in the unit or lump sum prices below, modifications in the bid form, or alternate proposals not specified in the bid proposal shall make the bid irregular and subject to rejection.

2. All quantities listed below are estimates only and the City reserves the right to raise, lower, or eliminate any quantity or item and in any case the unit or lump sum prices shall be used in determining partial or final payment.

ESTIMATED COSTS

PHASE I HYDROGEOLOGIC SITE CHARACTERIZATION

Sub-Total Phase I

Lump Sum \$ _____

Time to complete work after award

Days _____

**PHASE II GEOPHYSICAL INVESTIGATIONS – SELECTION OF
SPECIFIC EXPLORATORY DRILLING TARGETS/SITES**

Product -- At the conclusion of this phase of the investigation, the company will have identified specific exploratory test well drilling targets (if favorable targets are available) and will place wooden stakes in the ground at each test well location. A short letter report that summarizes the results of Phase I and Phase II will be submitted to the City. A total of ten (10) copies shall be submitted along with a CD of the report

Sub-Total Phase II

Lump Sum \$_____

Time to complete work after award

Days _____

PHASE III EXPLORATORY TEST WELL DRILLING/DEVELOPMENT

Task A – Site Review by State and County Departments of Health

Apply for and obtain drilling permits from State and County agencies.

Cost to be determined based upon the results of Phases I and II.

Task B -- Drilling

This includes all drilling subcontractor costs such as: mobilization of equipment, drilling casing, grout, and drilling of well. Furthermore, this fee includes a geologist on-site to supervise drilling operations and to log each well. Each test well will be developed and a brief pumping test will be performed to assess the potential to develop groundwater resources. Field chemistry tests will be made during the brief pumping test and will assess (on a preliminary basis), pH, iron, total hardness, calcium hardness, conductivity, manganese, alkalinity and temperature. A final composite water sample will be submitted to a laboratory for analyses of EPA water quality parameters.

Cost to be determined based upon the results of Phases I and II.

PHASE IV DEVELOP PLAN FOR UTILIZATION OF RBF AND ASSESS THE AMOUNT OF WATER THAT SURFICIAL DEPOSITS COULD ACCEPT FOR TREATING SURFACE WATER

Cost to be determined based upon the results of Phases I and II.

This bid is subject to acceptance within a period of sixty (60) days from the day of the bid.

The undersigned bidder acknowledges receipt of the following addenda, which have been considered in the preparation of this bid.

No. _____ Dated _____

No. _____ Dated _____

CONTRACTOR: _____ DATE: _____

ADDRESS: _____ PHONE: _____

FAX#: _____

Signature: _____
(Printed or Typed)

Signature: _____
(Signed)

Title: _____

AFFIDAVIT

I, _____, being an authorized representative of the firm of
_____, located in the City of _____,
State _____, Zip Code _____, Phone _____, have read
and understand the contents of the formal request for bids and hereby submit our bid
accordingly as of this date _____.

Signature of Authorized Representative

Attest